# OPERATION & MAINTENANCE OF THE LEBANESE UNIVERSITY CAMPUS - HADATH



VOLUME 2: TECHNICAL DOCUMENTS
SECTION 2.5 - WORK PACKAGE 4 - ARCHITECTURAL &
CIVIL WORKS

#### Work Parcel 4: Finishing And Civil Works

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#### Work Parcel 4: Finishing And Civil Works

#### 4.1 Scope of Work

The aim of the maintenance is to keep up all executed works in good conditions and to ensure their workability and good performance within the project life time.

The maintenance of all finishing and civil works shall include management, personnel and labours, tools, plant, equipment services, supplies, and all utilities required to operate and maintain the facility.

Maintenance works shall comply with the terms of contract agreement and contract documents.

The Maintenance Contractor shall establish a manual of procedures to be agreed by the employer representative, defining all procedures, method of care, preservation, replacing and/or repairing concerned building products and finishes.

In each manual include information for each component of building products, including applied materials and finishes:

- a- General description
- b- Design factors and assumption
- c- Copies of applicable Shop Drawings and Product Data
- d- Identification of each product used, including:
  - I. Name of manufacturer
  - II. Model number
  - III. Serial number of each component
  - IV. Size (where available)
  - V. Material composition
  - VI. Colour (where available)
  - VII. Texture (where available)
- e- Tests procedures which should comply with the Standards and Codes specified in the original approved Project's Specifications
- f- Method of execution instructions
- g- Emergency instructions
- h- Care and Maintenance procedures, Instructions and Schedules
- i- Essential maintenance procedure shall include the following:
  - I- Site inspections and routine check-ups defining status and locating defects
  - II- Alignment, adjusting and checking
- j- Essential maintenance tasks with the periodicity of each task, specific for each item shall include the following:
  - I- Routine and regular works to prevent any defect/degradation
  - II- Minor works realized immediately after the appearance of any defect or shortcoming to prevent any further degradation
  - IV- Replacement of defected items after a general degradation
- k- Schedules for repair/replacement
- 1- Coordination with the adjoining works
- m- Protection of the adjoining works
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## Work Parcel 4: Finishing And Civil Works

## 4.2 Finishing Items Maintenance Procedures

- 4.2.1 Internal Finishing Maintenance Procedures
  - 4.2.1.1 Flooring
  - 4.2.1.2 Walls
  - 4.2.1.3 Ceilings

## Work Parcel 4: Finishing And Civil Works

4.2.1.1 Internal Flooring Finishing Maintenance Procedures

#### A General

Internal finishing works should be kept in good condition.

This should be done by providing proper treatment, adequate measures, identifying defects and responding to Lebanese University Management comments through periodical site inspection attached to schedules clarifying diagnostics, location, volume of defected areas and the like.

## B Maintenance of Rigid Flooring (Agglomerated/Ceramic/Marble Tiles)

Remove and take-out all tiles: flaking, thrilling, parting, scaling and/or weakened with any other type of defect.

Supporting base layer should be repaired/removed completely or partially as mentioned in the Maintenance of rigid flooring includes also Peeling, Grouting, Jointing, Polishing and the like.

Supply and install new rigid flooring in the located areas similar to the existing, (refer to schedule of rooms finishes)

## C Maintenance of Flexible Flooring (Rubber/Vinyl Tiles/Layers)

Lift and take-out all tiles and/or part of layers: parting, tearing away, unglued, loosen or affected by any other type of defect.

No repair or replacement shall be occurred before inspecting substrates (screed) and repairing or remaking the base layer same as existing.

Re-glue loosen parts which are in good conditions

Supply and install new flexible flooring in the located areas similar to the existing, (refer to schedule of rooms finishes).

## D Maintenance of Painted Flooring

Rub and grind all parts: flaked, blister and/or any other type of defect.

Clean, brush, scrap and remove old paint totally or locally as per diagnostic.

Check substrates (screed and/or concrete slabs) and repair partially or completely same as before.

Apply primer and paint coats same as before, (refer to schedule of rooms finishes).

## **E Maintenance of Laminated Wood Flooring**

The work shall include rubbing, etc. all wearing surfaces

Remove and repair/replace, same as before, all wood broken, damp, humid, moist, wet, mould or attacked by any other type of defects.

Check substrate and repair partially or completely same as before.

## Work Parcel 4: Finishing And Civil Works

**4.2.1.2 Internal Walls Finishing Maintenance Procedures** 

#### A General

Accessible and non-accessible surfaces should be inspected periodically for identifying and scheduling defects.

Any contingency disturbance should be notified by the Lebanese University Management.

Maintenance Contractor should provide proper treatment, adequate preventive measures for keeping all internal walls finishing in good condition.

#### **B** Maintenance of Stone or Ceramic Cladded Walls

Remove and take-out all tiles: flaking, thrilling, parting, scaling, cracked, broken and/or weakened with any other type of defect.

Plaster surfaces, where available, should be repaired/removed completely or partially as mentioned in the diagnostic.

Supply and install new tiles similar to the existing, (refer to schedule of rooms finishes).

#### C Maintenance of Thick Coated Walls "Stucco"

Survey by knocking on the plaster surfaces in order to locate and repair the detached parts (sound recognization).

Verify that fissures, cracks, flakes and any other damages are not due to a defect in the concrete substrates such as reinforcement corrosion, concrete deflection, etc.

Remove defective parts with appropriate tools and materials.

Grind surfaces to be repaired.

Rendering surfaces to receive Stucco layers.

Apply Stucco on restored areas to match with the existing, (refer to schedule of rooms finishes).

#### D Maintenance of Painted Walls

Rub and grind all parts: raised, flaked, cracked, blister, discolored, broken and/or any other type of deterioration.

Prepare substrates by cleaning, brushing, rubbing, scraping and grinding raised parts, patching cracks, openings and broken areas, and removing old paint totally or locally as per diagnostic.

Repair substrates (plaster/concrete) partially or completely as per inspection schedules.

Apply primer and paint coats same as before.

### E Maintenance of Wooden Wall Panels (in Amphitheaters)

The work shall include rubbing, painting, etc. all wearing surfaces

Remove and repair/replace, same as before, all wood broken, damp, humid, moist, wet, mould or attacked by any other type of defect.

## Work Parcel 4: Finishing And Civil Works

**4.2.1.2 Internal Walls Finishing Maintenance Procedures** 

## F Maintenance of Acoustic Fabric Wall (in FOS Amphitheaters)

Check Acoustic fabric wall covers, interior lining and wooden frames. Removal and taking-out of defective and damaged covers. Install new fabric covers similar to the existing.

#### **G Maintenance of Glass Blocks Walls**

Remove and take-out all tiles: thrilling, broken or weakened with any other type of defect. Remove, repair/replace and grout defected glass blocks to match with the existing. Check and repair fixation with adjoining material. Locate and repair defective joints.

## Work Parcel 4: Finishing And Civil Works

**4.2.1.3** Internal Ceilings Finishing Maintenance Procedures

#### A General

Accessible and non-accessible surfaces should be inspected periodically for identifying and scheduling defects.

Maintenance Contractor should provide proper treatment, adequate preventive measures for keeping all internal ceilings finishing in good condition.

## **B** Maintenance of Painted Ceilings

Rub and grind all parts: raised, flaked, blister and/or any other type of defect.

Clean, brush, scrap and remove old paint totally or locally as per diagnostic.

Check substrates (concrete/plastered slabs) and repair partially or completely same as before.

Apply primer and paint coats same as before, (refer to schedule of rooms finishes).

## **C Maintenance of Suspended Ceilings**

Lift and take-out defected false ceilings units: broken, loosen, displaced, corroded for steel types, discolored or yellowish for painted types and/or any other defect.

Check suspension system for any defect and repair.

Supply and install new suspended ceilings units in the located areas similar to the existing, (refer to schedule of rooms finishes).

For painted types, clean suspended units and apply reviviscence coat of paint to match with the existing, (refer to schedule of rooms finishes).

## Work Parcel 4: Finishing And Civil Works

## 4.2 Finishing Items Maintenance Procedures

4.2.2 External Finishing Maintenance Procedures

4.2.2.1 Walls

## Work Parcel 4: Finishing And Civil Works

**4.2.2.1** External Walls Finishing Maintenance Procedures

#### A General

Accessible and non-accessible surfaces should be inspected periodically for identifying and scheduling defects.

Any contingency disturbance should be notified by the Lebanese University Management.

Maintenance Contractor should provide proper treatment, adequate preventive measures for keeping all external ceilings finishing in good condition.

#### **B Maintenance of External Walls Stone/Marble Cladded**

Remove and take-out all tiles: flaking, thrilling, parting, scaling, cracked, broken and/or weakened with any other type of defect.

Plaster surfaces, where available, should be repaired/removed completely or partially as mentioned in the diagnostic.

Supply and install new tiles similar to the existing, (refer to schedule of finishes).

#### D Maintenance of Thick Coated External Walls Stucco

Survey by knocking on the plaster surfaces in order to locate and repair the detached parts (sound recognization).

Verify that fissures, cracks, flakes and any other damages are not due to a defect in the concrete/plastered substrates.

Remove defective parts with appropriate tools and materials.

Grind surfaces to be repaired.

Rendering surfaces to receive Stucco layers.

Apply Stucco on restored areas to match with the existing, (refer to schedule of finishes).

#### E Maintenance of Painted External Walls

Rub and grind all parts: raised, flaked, cracked, blister, discolored, broken and/or any other type of deterioration.

Prepare substrates by cleaning, brushing, rubbing, scraping and grinding raised parts, patching cracks, openings and broken areas, and removing old paint totally or locally as per diagnostic.

Repair substrates (plaster/concrete) partially or completely as per inspection schedules.

Apply primer and paint coats same as before, (refer to schedule of rooms finishes).

# F Maintenance of Insulated Aluminium Panels Cladding to External Walls and Canopies (Alucomat)

Remove and take-out all defected panels: thrilled, loosen and/or any other type of defect.

## Work Parcel 4: Finishing And Civil Works

## **4.2.2.1** External Walls Finishing Maintenance Procedures

Check mechanical fixation stability, bolts and any other related item.

Check and repair substrates as mentioned in the diagnostic.

Supply and install new aluminium insulated panels similar to the existing, (refer to schedule of finishes).

## Work Parcel 4: Finishing And Civil Works

## 4.2 Finishing Items Maintenance Procedures

- 4.2.3 Joinery And Fenestration Maintenance Procedures
  - 4.2.3.1 Doors, Windows And Partitions
  - 4.2.3.2 Handrails
  - 4.2.3.3 Skylights And Skydomes
  - 4.2.3.4 Steel fences and gates

## Work Parcel 4: Finishing And Civil Works

4.2.3.1 Doors, Windows, Partitions and Fences Maintenance Procedures

#### A General

The Contractor should assure the maintenance of all doors, windows and partitions to work properly and to provide the required sound air and water tightness.

This should be done by providing proper treatment, routine check-ups, adequate preventive measures, identifying defects and responding any contingency disturbance notified by Lebanese University Management.

The above mentioned includes also maintaining/repairing/adjusting/replacing with new similar to the existing, ironmongery, sealant, rubber gaskets, glazing, painting, etc...

Inspection shall be visually or by device as necessary.

## **B Maintenance of Aluminium Doors, Windows and Partitions**

More site inspection to all aluminium doors, windows and partitions should be added before, during and at end of rainy season.

Check and repair fixing system, stability, any deformation, deflection, discoloration, and the like, and repair.

Check defective glass panels where required: broken, discolored, scratched, water stains, and/or any other type of problems; repair and/or refer to products instructions.

Check and restore joints between glass and aluminium frame, if any hole, water-tightness problem and/or any other type of defect.

Inspect and restore defective joints with the adjoining structures.

Check and correct mechanism of all movable panels if not clogged and/or showing any other problem.

The above mentioned work consists also of checking and repairing/adjusting/replacing with new similar to the existing, all related ironmongery and hardware.

## **C Maintenance of Aluminium Rolling Shutter Doors**

Switch off the power of the electrically operated doors during maintenance or other works.

Check and repair bolted/welded connections as necessary.

Check the ironmongery items by referring to the checklist in the maintenance instructions and repair/adjust/replace with new similar to the existing.

Check and repair fixing system, stability, any deformation, deflection, discoloration, and the like, and repair.

Check and correct doors operational systems.

Inspect and restore defective frames and joints with the adjoining structures.

## D Maintenance of Curtain Walls and Structural Glazing

More site inspection to all structural glazing and curtain walls should be added before, during and at end of rainy season.

## Work Parcel 4: Finishing And Civil Works

#### 4.2.3.1 Doors, Windows, Partitions and Fences Maintenance Procedures

Check defective glass: broken, discolored, scratched, water stains, and/or any other type of problems; repair and/or refer to products instructions.

Check joints between glass and aluminium frame, if any hole, water-tightness problem and/or any other type of defect.

Check fixings accessories, joints and fixation with the adjoining structures, hardware and ironmongery, and repair/adjust/replace with new similar to the existing.

Check system stability and correct.

Check and restore mechanism of all movable panels if not clogged and/or showing any other problem.

#### **E Maintenance of Wooden Doors**

Check the ironmongery items by referring to the checklist in the maintenance instructions and repair/adjust/replace with new similar to existing.

Check wood doors for discoloration, deterioration, termites, softening, cracking, damage, deformation such as buckling, bending, deflection, and the like, define the causes and accordingly repair or replace with new matching with the existing.

Check and repair also defective frames and damaged joints with the adjoining structures.

Check and repair doors operational systems.

## F Maintenance of Steel, Sliding and Rolling Shutter Doors

Switch off the power of the electrically operated doors during maintenance or other works.

Check and repair bolted/welded connections as necessary.

Check the ironmongery items by referring to the checklist in the maintenance instructions and repair/adjust/replace with new similar to the existing.

Check and repair also defective frames and damaged joints with the adjoining structures.

Check steel members for any abnormal/excessive deflection/deformation, sagging etc. and repair

Check and repair also steel items for any rust appearance, by using painting procedure same as existing. Check doors operational systems.

## G Maintenance of Aluminium Sun Screen Louvers (on Steel Structures)

Check defective in bolts, fixation, operation system (electrical or manual), etc.. and repair.

Check and restore appearance of discoloration (if any) due to weather conditions changes and the like.

Repair broken units or replace with new similar to the existing.

Repair fixation with the adjoining structures.

#### **H** Maintenance of Steel Fence

## Work Parcel 4: Finishing And Civil Works

4.2.3.1 Doors, Windows, Partitions and Fences Maintenance Procedures

Check and repair bolted/welded connections as necessary.

Check the ironmongery items by referring to the checklist in the maintenance instructions and repair.

Check and repair also defective supports, posts, panels and damaged joints with the adjoining structures.

Check steel members for any abnormal/excessive deflection/deformation, sagging etc... and repair

Check and repair also steel items for any rust appearance, by using painting procedure same as existing.

## Work Parcel 4: Finishing And Civil Works

**4.2.3.2** Handrails Maintenance Procedures

#### A General

The Contractor should keep the handrails in good condition.

This should be done by providing proper treatment, routine check-ups, adequate preventive measures, identifying defects and responding to Lebanese University Management.

The above mentioned includes also rust treatment, painting, rigidity of elements...

#### **B Maintenance of Stainless Steel and Aluminum Handrails**

Check and repair/adjust fixing system, stability, and the like.

Inspect and restore defective joints with the adjoining structures.

Replace all scratched or damaged items with new matching with the existing.

Check wooden handrail top for aluminum handrails existing in FOS for discoloration, deterioration, termites, softening, cracking, damages, and the like, define the causes and accordingly repair or replace with parts that matchs with the existing.

#### C Maintenance of Painted Black Steel Handrails (Internal and External)

Preventive checkup should be provided responding to Lebanese University Management needs.

Check black paint to steel handrails and repair located areas.

Check and restore anchor bolts.

Check and repair welded and/or bolted connections as necessary.

Check steel members for any abnormal/excessive deformation/deflection, sagging, etc., and repair

Check defective glass where required: broken, discolored, scratched, water stains, and/or any other type of problems; repair/replace with new similar to the existing.

Remove and repair defective items with all related supports and joints.

Replace old damaged handrails items with new similar to the existing.

## Work Parcel 4: Finishing And Civil Works

4.2.3.3 Skylight and Skydome Maintenance Procedures

#### A General

The Contractor should assure the maintenance of all skylights and skydomes to work properly and to provide the required sound air and water-tightness.

This should be done by providing proper treatment, routine check-ups, adequate preventive measures, identifying defects and responding to Lebanese University Management.

The above mentioned includes also maintaining/repairing/replacing with new similar to the existing, ironmongery, sealant, rubber gaskets, glazing, etc...

## **B** Maintenance of Skylights and Skydome

Preventive checkup should be provided responding to Lebanese University Management needs.

Check glass for any broken and/or defective one,

Check metal items for any rust or discoloration,

Check anchor bolts,

Check connections (bolted or welded),

Check metal members for any abnormal/excessive, deflection/deformation, sagging etc. and repair.

Check and restore joints between glass and frame, if any hole, water-tightness problem and/or any other type of defect.

Remove defective items

Restore skylights and skydomes as follows (similar to the existing):

- Repair defective units with all related supports, joints, connection, paint and glass,
- Replace broken or damaged glass units
- Replace old damaged skylights and skydomes units with new, complete and matching with the existing.

## Work Parcel 4: Finishing And Civil Works

4.2.3.4 Steel fences and gates Maintenance procedures

#### A General

The Contractor should assure the maintenance of all steel fences and gates to work properly at all time. This should be done by providing proper treatment, routine check-ups, adequate preventive measures, identifying defects .

The above mentioned includes also maintaining/repairing/replacing with new parts that matchs with the existing ones, ironmongery,etc...

#### **B** Maintenance of Steel Fences and Gates

The fences and gates should be checked regulary for any signs of damages or rust.

Any damage or rust signs should be repaired immediatly.

If any part of the fences or gates breaks or falls down, an immediate action must be taken to remove or repair the damage as soon as possible.

## Work Parcel 4: Finishing And Civil Works

## 4.2 Finishing Items Maintenance Procedures

#### 4.2.4 Furniture

- 4.2.4.1 Amphitheater Seats
- 4.2.4.2 Cafeteria Furniture
- 4.2.4.3 Marker Boards
- 4.2.4.4 Stadium seats

## Work Parcel 4: Finishing And Civil Works

**4.2.4.1** Amphitheaters Seats Maintenance Procedures

#### A General

The Maintenance Contractor should assure the maintenance of all amphitheaters seats to be kept in good condition.

This should be done by providing proper treatment, routine check-ups, adequate preventive measures, identifying defects and responding to Lebanese University Management.

The above mentioned includes also treatment of mechanical parts, painting, upholstery, desks, etc..

#### **B** Maintenance of Steel Frame

Check paint to steel frames and repair deteriorated items.

Check anchor bolts.

Check welded and/or bolted connections as necessary,

Check steel members for any abnormal/excessive deformation/deflection, sagging, etc., and repair.

Remove defective items, repair or replace with new similar to the old.

Check and restore fixation and mechanism of all seats

## C Maintenance of Wooden Seats (H4 Seat)

The work shall include rubbing, protective painting, etc. all wearing surfaces

Remove and repair/replace, same as before, all wood broken, damp, humid, moist, wet, mould or attacked by any other type of defects.

Replace damaged wood seats with new similar to the existing

## D Maintenance of Upholstery (H5 Seat)

Check seats fabric cover, interior padding and lining and upholstery.

Removal and taking-out of defective and damaged seats,

Restore fabric seats (similar to the existing):

- \* Upholster fabric seats,
- \* Replace with new.

## E Maintenance of Writing Desk

Check fixing accessories, connections and supports and repair the deteriorated items.

Rub and varnish/Lacquer wooden parts

Repair paint to steel parts.

Check stability and mechanism to movable and fixed items.

#### F Maintenance of Professor Desk

# Work Parcel 4: Finishing And Civil Works

## **4.2.4.1** Amphitheaters Seats Maintenance Procedures

Check fixing accessories, connections and supports and repair the deteriorated items. Rub and varnish/Lacquer wooden parts.

Repair paint to steel parts.

# Work Parcel 4: Finishing And Civil Works

**4.2.4.2** Cafeteria Furniture Maintenance Procedures

#### A General

The Maintenance Contractor should assure the maintenance of all furniture elements to be kept in good condition.

This should be done by providing proper treatment, routine check-ups, adequate preventive measures, identifying defects and responding to Lebanese University Management.

The above mentioned includes also treatment of mechanical parts, painting, etc..

#### **B** Maintenance of Tables

Check and repair fixing accessories, connections of deteriorated items.

Repair and/or replace scratched or damaged tables tops.

Removal and taking-out of defective and damaged tables and replace with new similar to the existing.

#### **C Maintenance of Chairs**

Check defective polypropylene chairs and replace with new similar to the existing.

Removal and taking-out of defective and damaged chairs

Repair and/or replace with new similar to the existing

#### D Maintenance of Counters

Check fixing accessories, connections and joints and repair.

Check damaged or deteriorated parts (top and/or frame,...), repair and replace with new matching with the existing.

## Work Parcel 4: Finishing And Civil Works

**4.2.4.3** Marker Boards Maintenance Procedures

#### A General

The Maintenance Contractor should inspect periodically all marker boards (fixed and sliding), identify and schedule defective parts or completely damaged boards and ensure the appropriate maintenance to keep the boards in good condition.

This should be done by providing proper treatment, routine check-ups, adequate preventive measures, identifying defects and responding to Lebanese University Management.

Check mechanism, fixings accessories, frame, colour, paint for glass chalk boards existing in FOS etc... and repair.

Remove and take-out defective, scratched, deteriorated or damaged marker/chalk boards and replace with new matching with the existing.

For sliding board check and correct stability, workability, counter weight and all items related to its movement.

# Work Parcel 4: Finishing And Civil Works

**4.2.4.4 Stadium Seats Maintenance Procedure** 

#### A General

The Maintenance Contractor should assure the maintenance of all stadium seats at all time.

This should be done by providing proper treatment, routine check-ups, adequate preventive measures, identifying defects.

The above mentioned includes also maintaining/repairing/replacing with new similar to the existing, etc...

#### **B Maintenance of Stadium Seats**

The contractor shall carry out regular inspections for the stadium seats for any signs of breaks or looseness to prevent any harm to students or spectators.

The contractor will be responsible for rectification of any damage by either replacing or replacing the damaged stadium seats immediatly.

# Work Parcel 4: Finishing And Civil Works

#### 4.3 Civil Works Items Maintenance Procedures

- 4.3.1 Structural Works Maintenance Procedures
  - 4.3.1.1 Ceilings
  - 4.3.1.2 Walls
  - 4.3.1.3 Roofing
  - 4.3.1.4 Steel Structure

## Work Parcel 4: Finishing And Civil Works

**4.3.1.1 Ceilings Structures Maintenance Procedures** 

#### A General

Inspect periodically the accessible and non-accessible ceilings, define the status, place indicators where needed to study the evolution of the structures disturbance and describe/schedule the diagnosis to be worked on.

The Maintenance Contractor should keep the concrete structures in good condition to assure the rigidity of the building structure.

This should be done by providing proper treatment, routine check-ups, adequate preventive measures, identifying defects and responding to Lebanese University Management.

The above mentioned includes repairing damaged or deteriorated concrete and to overcoming design or/and construction deficiencies by treating of deteriorated, damaged or defective concrete.

#### **B** Maintenance of Slabs

Check the presence of defective expansion/contraction joints and/or joints cover, corroded steel, rust traces, deteriorated concrete, cracks, deflection, levelness defect, peeling concrete surfaces and the like.

Repair fissures by sealing or injecting approved materials, unless otherwise indicated.

Treat and protect corroded steel reinforcement as indicated by the Maintenance Contractor.

Demolish defective concrete and replace with new similar to the existing.

Provisional propping and shoring are required while repairing and replacing operations.

The Maintenance Contractor has to ensure the safety of the structures during and after the execution of the works and the bonding and coherence between old and new structures.

## Work Parcel 4: Finishing And Civil Works

4.3.1.2 Walls Structures Maintenance Procedures

#### A General

Inspect periodically the accessible and non-accessible walls, define the status, place indicators where needed to study the evolution of the walls disturbance and describe/schedule the diagnosis to be worked on.

The Maintenance Contractor should keep the concrete walls in good condition to assure their rigidity. This should be done by providing proper treatment, routine check-ups, adequate preventive measures, identifying defects and responding to Lebanese University Management.

#### **B Maintenance of Concrete Walls**

Maintenance of Concrete walls includes repairing damaged or deteriorated concrete and to overcoming design or construction deficiencies by treating of deteriorated, damaged or defective concrete. Check the presence of defective expansion/contraction joints and/or joints cover, corroded steel, rust traces, deteriorated concrete, cracks, deflection, levelness defect, peeling concrete surfaces and the like.

Repair fissures by sealing or injecting approved materials, unless otherwise indicated.

Treat and protect corroded steel reinforcement as indicated by the Maintenance Contractor.

Demolish defective concrete.

Provisional propping and shoring are required while repairing and/or replacing operation.

The Maintenance Contractor has to ensure the safety of the structures during and after the execution of the works and the bonding and coherence between old and new structures.

## Work Parcel 4: Finishing And Civil Works

**4.3.1.3 Roofing Maintenance Procedures** 

#### A General

The Contractor should assure the maintenance of all waterproofing systems to work properly and to provide the required water-tightness.

Any contingency disturbance shall be notified by the Lebanese University Management.

A visual periodical inspection is necessary to check the waterproofing membrane status with all related joints, mastic, overlapping, flashing and the like.

The above mentioned includes all materials and accessories required to repair and/or replace the different layers of each waterproofing system to ensure the good performance of the system.

The work shall also includes repairing substrates (screed) where needed.

Check defective joints, sealants, mastics, backing rods, joints covers, flashing, counter flashing and repair defected items and/or replace with new similar to the existing.

Check appearance of fissures, membrane flaking, overlapping detachment and repair/replace with new similar to the existing as per schedules clarifying diagnostics, location and volume of degradation.

Where general degradation occurred, remove defective area completely with all damaged layers and related materials, repair substrates, apply successively the different new layers matching with the

The Maintenance Contractor shall ensure the bonding and coherence between the old and the new materials.

All substrates shall be checked and repaired before starting the above mentioned maintenance works. The Maintenance Contractor shall guarantee the executed works as per **Specifications and Standards.** 

## Work Parcel 4: Finishing And Civil Works

**4.3.1.4** Steel Structures Maintenance Procedures

#### A General

The Maintenance Contractor should keep the steel structures in good condition to assure the rigidity of the building structure.

This should be done providing proper treatment, routine check-ups, adequate preventive measures, identifying defects and responding to Lebanese University Management.

The above mentioned includes painting of structural steel to prevent corrosion and to maintain a good appearance. Decisions on frequency and extent of repainting and type of system to be used required consideration of numerous factors and alternatives.

#### **B** Maintenance of Steel Structures

Check fixings accessories, structure stability, deflection, excessive deformation, sagging, rust, corrosion, discoloration, connections (bolted/welded), supports, bolts, mechanism, etc... and repair defective parts/areas.

Remove and take-out defective, deteriorated or damaged steel structures parts and replace with new similar to the existing.

Check steel members for any anormal/excessive deflection/deformation, sagging etc. and repair/adjust/replace with new similar to the existing.

Check and repair also steel items for any rust appearance, by using painting procedure same as existing. Repair protective paint in the located areas as follows: scrap surfaces, remove old paint, sand-blast then apply minimum 2-coats of protective coat as per manufacturer instructions and matching with the existing.

#### Work Parcel 4: Finishing And Civil Works

#### 4.4 Appendix

- 4.4.1 List of Manufacturer And Supplier / Subcontractor
- 4.4.2 List of As Built Drawings in all trades
- 4.4.3 Items Quantities Per Faculty
  - 4.4.3.1 Fine Arts Institute Bldg (B)
  - 4.4.3.2 Faculty of Law & Political Sciences Bldg (D)
  - 4.4.3.3 Faculty of Engineering Bldg (G)
  - 4.4.3.4 Faculty of Pharmacy Bldg (H)
  - 4.4.3.5 Extension of the Faculty of Sciences Bldg (J)
  - 4.4.3.6 Faculty of Medicine Bldg (M11-M12)
  - 4.4.3.7 Faculty of Dentistry Bldg (M13-M14)
  - 4.4.3.8 Faculty of Public Health Bldg (Q)
  - 4.4.3.9 Faculty of Sciences (FOS)
- 4.4.4 Items Quantities Per Supporting Buildings
  - 4.4.4.1 Conference Center Bldg (F)
  - 4.4.4.2-1 Stadium Bldg (K1)
  - 4.4.4.2-2 Open Air Multipurpose Stadium Bldg (K2)
  - 4.4.4.2-3 Olympic Swimming Pool Bldg (K3)
  - 4.4.4.3 Library of Medical Sciences Bldg (M2)
  - 4.4.4.4 Male Dormitories Bldg (R01)
  - 4.4.4.5 Female Dormitories Bldg (R02)
  - 4.4.4.6 Technical Area Bldg (T1, T2 & T3)
  - 4.4.4.7 Restaurant & Functional Housing Bldg (U2)
  - 4.4.4.8 Central Parking Bldg (U3)
  - 4.4.4.9 Eastern Parking Bldg (V1)
  - 4.4.4.10 Water Tower Bldg (V2)
  - 4.4.4.11 Pumping Station Bldg (V3)
  - 4.4.4.12 Utility Tunnel Bldg (V4)
  - 4.4.4.13 Underground Storm Water Reservoir Bldg (V6)
  - 4.4.4.14 Underground Western Parking and Central Catering Bldg (X)
  - 4.4.4.15 FOS Library
  - 4.4.4.16 FOS Cafeteria
  - 4.4.4.17 Steel Hangar
  - 4.4.4.18 Steel Portable cabinets (including Lebanese Army and Interior Security Forces Cabinet Units)

## Work Parcel 4: Finishing And Civil Works

## 4.4.1 List of Finishing Materials Manufacturer And Supplier/Subcontractor

## Trade: Joinery and Carpentry Works

	Equipment	Subcontractor / Supplier	Contact	Manufacturer	Contact
1	Doors Hardware	SIMAC		ELITE	
2	Doors Hardware	SIMAC		EZ SET	
3	Doors Hardware	SIMAC		IMPERIAL	
4	Doors Hardware	SIMAC		Pfaffenhain	
5	Doors Hardware	SIMAC		JPM	
6	Doors Hardware	SIMAC		EURASIA	
7	Doors Hardware	SIMAC		Geze	
8	Doors Hardware	SIMAC		BRITON	
9	Doors Hardware	SIMAC		DORMA	
10	Doors Hardware	SIMAC		GLORY	
11	Varnish paint			DEVOE	
12	Formica			FORMICA	
13	Doors Hardware			SADOLIN	
14	Doors Hardware			FLEET	
15	Doors Hardware			RYOBI	
16	Door frame			MT Bitar	
17	Doors Paint			General Paint Co.	
18	Insulation rockwool			Jordan Rockwool	
19	Fire resistance test company			SHELMAN	
2•	Fire rated wooden panels for doors			The Reymond Knaider	

## Trade: Metal Works

	Equipment	Subcontractor / Supplier	Contact	Manufacturer	Contact
1	Doors Hardware	SIMAC	7	ELITE	
2	Doors Hardware	SIMAC		IMPERIAL	
3	Doors Hardware	SIMAC		Pfaffenhain	
4	Doors Hardware	SIMAC		JPM	
5	Doors Hardware	SIMAC		BRITON	
6	Doors Hardware	SIMAC		DORMA	
7	Door frames			Michel Bitar	
8				Antranik Baljian	
9	Aluminum			FOLDA	
10				PHIFER-WIRE	
11	Aluminum fins			SIDEM	
12	Fire rated sliding doors			TREDI GRUPPO DIERRE	
13				UPAT	
14	Aluminum windows and doors			DANTZIGUIAN	
15				ALUTEX	
16	Steel rolling shutters			FATHALLA INDUSTRIES	
17	Aluminum			ALUMINUM HMEIDANI	
18			20 9	NOVI-Italy	

## Work Parcel 4: Finishing And Civil Works

#### 4.4.2 List of As Built Drawings in all Trades

02 IRN	B	0 1 Block/Zone	R 2 1	1 3 2 Type of Document	B Level of Plans	Running Number	Revision
Internal Revision Number		Zone defining the Building Examples: R2: Female Dorm R1: Male Dorm IS: Type Spaces OO: Whole Project	o= (Whole Zone) 1,2,3,4,5,6 (Parts of zone or whole zone) 7= Miscellaneous 8=Typical Spaces	1= Plans 2=Sections 3=Elevations 4=Details on A0 5=Ceneral Details on Λ3 6=Particular Details on Λ3 7=Schedules 8=Miscellaneous	0-Foundation 1=2nd Basement 3=Ground Floor 4=1 st Floor 5=2nd Floor 6=3rd Floor 7=4th Floor 8=5th Floor 9=Roof	To facilitate diff documents of the same type and the same location	A, B, C, D

Trades (As needed for Drawing Numbering) Trade A Trade B Trade C Trade D Trade E Structures & Sire Works Technical Equipment Technical Equipment Finishes OutBoards Architectural Main Pumping General Structure General M+E Treatment A05 B00 C00 D02 E00 Executive equipment & Station **Drawings** Drawings Drawings accessories Decorative A06 Water Supply B01 Concrete Works C10 HVAC D04 Fountains Scientific Lab Frame Works & A07 Waste Water B02 C20 Plumbing D08 Canopies Equipment High Voltage External Signs & Waterproofing & C30 Installation A11 B03 Joints Boards General Transformer External Aluminum Electrical Network Δ13 ROS C31 Substat Static UPS & Glazing Low Current R09 Reinforcement C32 A14 (Refer to CO4)
Chilled & Heating System Precast Flements A15 B10 C33 Lighting layout Water Concrete Drawings B11 C34 Miscellaneous with Reinforcement Earthing System & C35 Lightning Project C40 Installation General C41 Telephone Systems C42 Computer Network C43 Sound System

Fire Alarm System

Clock System

C44

C45

# List of Finishing

## 4.4.3.1 National School Of Fine Arts (Bldg. B)

**Work parcel:** Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	1,581		
	Mineral fiber tiles 60x60 & 120x60	E10	12,273		
	Aluminum strips	E10	688		
Ceiling	Perforated acoustical panels in amphitheatres	E10	2,017	$m^2$	
	Plaster on metal lath	E10			
	Ceiling paint	E12	9,030	$m^2$	
	Floor ceramic tiles	E06	694	***	
	Agglomerated tiles, treads and risers	E06	19,411	$m^2$	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06	11	***	
Floor	Vinyl and rubber	E07	3,797		
1 1001	Carpet	E07	940	$m^2$	
	Raised floor	E08			
	Floor paint	E12	12,871	$m^2$	
	Stone	E06			
	Wall paint	E12	31,395	$m^2$	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02			
Walls	Wall ceramic tiles	E06	2,599		
vv alls	Polyurethane varnish to wood	E12	1,345	m <sup>2</sup>	
	Glass blocs walls	E01			
	Stone Cladding	E06	446	$m^2$	

## Work parcel: External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
Walls	Stone cladding Insulated aluminum panels "Alucomat"	B04 B04	6,800	m <sup>2</sup>	
	Thick coating "Stucco"	B04	1,145	m <sup>2</sup>	

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	3,865	$m^2$	
	Curtain walls	B06	87	$m^2$	
Doors.	Structural glass	B06			
Windows &	Wooden doors	E04	459	nb	
Partitions	Steel doors	E05	127	nb	
Partitions	Sun screen louvers	E05	124	$m^2$	
	Gates	E05	17	nb	
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	628	lm	
Guard Tails	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes			-		

# List of Finishing

## 4.4.3.2 Faculty of Law and Political Sciences (Bldg. D)

 $\underline{\textbf{Work parcel:}} \text{ Internal finishing }$ 

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	5,485	m <sup>2</sup>	
	Mineral fiber tiles 60x60 & 120x60	E10	13,136	$m^2$	
	Aluminum strips	E10	747	$m^2$	
Ceiling	Perforated acoustical panels in amphitheatres	E10	3,736	$m^2$	
	Plaster on metal lath	E10			
	Ceiling paint	E12	14,124	$m^2$	
	Floor ceramic tiles	E06	886		
	Agglomerated tiles, treads and risers	E06	18,805		
	Marble tiles, treads and risers	E06	849		
	Laminated wood parquet and professor stage	E06	436		
Floor	Vinyl and rubber	E07	6,846	$m^2$	
14001	Carpet	E07	1,192	$m^2$	
	Raised floor	E08			
	Floor paint	E12	12,435		
	Concrete Tiles	E06	4,176	$m^2$	
	Wall paint	E12	33,199	$m^2$	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02			
Walls	Wall ceramic tiles	E06	3,262		
vv ans	Polyurethane varnish to wood	E12	279	$m^2$	
	Glass blocs walls	E01			
	Stone Cladding	E06	584	m <sup>2</sup>	

## **Work parcel:** External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding Insulated aluminum panels "Alucomat"	B04 B04	3,844 106	***	
Walls	Thick coating "Stucco"	B04	3,354	m <sup>2</sup>	

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	2,730	$m^2$	
	Curtain walls	B06			
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	440	nb	
Partitions	Steel doors	E05	182	nb	
	Sun screen louvers	E05	776	$m^2$	
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	2,618	lm	
Guard Tails	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing

## 4.4.3.3 Faculty of Engineering (Bldg. G)

**Work parcel:** Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	600		
	Mineral fiber tiles 60x60 & 120x60	E10	8,600		
	Aluminum strips	E10	420		
Ceiling	Perforated acoustical panels in amphitheatres	E10	1,500	m <sup>2</sup>	
	Plaster on metal lath	E10			
	Ceiling paint	E12	5,400	$m^2$	
	Floor ceramic tiles	E06	1,900		
	Agglomerated tiles, treads and risers	E06	12,100	$m^2$	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06	80		
Floor	Vinyl and rubber	E07	2,200	$m^2$	
1 1001	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	3,300		
	Stone	E06	200	$m^2$	
	Wall paint	E12	25,600	$m^2$	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02	92		
Walls	Wall ceramic tiles	E06	2,150	$m^2$	
w ans	Polyurethane varnish to wood	E12			
	Glass blocs walls	E01			
	Stone Cladding	E06			

## **Work parcel:** External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
Walls	Stone cladding	B04	5,192	m <sup>2</sup>	
	Insulated aluminum panels "Alucomat" Thick coating "Stucco"	B04 B04	15,100	m <sup>2</sup>	
			,		

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	2,100		
	Curtain walls	B06	800	$m^2$	
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	318	$m^2$	
Partitions	Steel doors	E05	110	$m^2$	
	Sun screen louvers	E05			
Guard rails	Stainless steel Guard rails and handrails	E05			
	Painted black steel guard rails and handrails	E05	325	$m^2$	
	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05	1	nb	
Skydomes					

# List of Finishing

## 4.4.3.4 School of Pharmacy (H)

 $\underline{\textbf{Work parcel:}} \text{ Internal finishing }$ 

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
Ceiling	Gypsum board	E10	275		
	Mineral fiber tiles 60x60 & 120x60	E10	6,586		
	Aluminum strips	E10	433	$m^2$	
	Perforated acoustical panels in amphitheatres	E10	178	$m^2$	
	Plaster on metal lath	E10			
	Ceiling paint	E12	3,310	$m^2$	
	Floor ceramic tiles	E06	2,592		
	Agglomerated tiles, treads and risers	E06	5,663	$m^2$	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06	71	$m^2$	
Floor	Vinyl and rubber	E07	642	m <sup>2</sup>	
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	2,737	$m^2$	
	Wall paint	E12	19,460	$m^2$	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02	1,871	m <sup>2</sup>	
Walls	Wall ceramic tiles	E06	2,108		
	Polyurethane varnish to wood	E12	242	$m^2$	
	Glass blocs walls	E01			
	Stone Cladding	E06			

## $\underline{\textbf{Work parcel:}} \ External \ finishing$

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
Walls	Stone cladding	B04	1,192	$m^2$	
	Insulated aluminum panels "Alucomat"	B04			
	Thick coating "Stucco"	B04			

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
Doors, Windows & Partitions	Aluminum windows, doors and partitions	B05	1,134		
	Curtain walls	B06	282	m <sup>2</sup>	
	Structural glass	B06			
	Wooden doors	E04	294	nb	
	Steel doors	E05	3	nb	
	Sun screen louvers	E05	279	m <sup>2</sup>	
Guard rails	Stainless steel Guard rails and handrails	E05	173	lm	
	Painted black steel guard rails and handrails	E05			
	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing

## 4.4.3.5 Extension of the Faculty of Sciences (Bldg. J)

**Work parcel:** Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	581		
	Mineral fiber tiles 60x60 & 120x60	E10	4,658		
	Aluminum strips	E10	322		
Ceiling	Perforated acoustical panels in amphitheatres	E10	462	$m^2$	
	Plaster on metal lath	E10			
	Ceiling paint	E12	3,641	$m^2$	
	Floor ceramic tiles	E06	508	$m^2$	
	Agglomerated tiles, treads and risers	E06	4,903	$m^2$	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06	103		
Floor	Vinyl and rubber	E07	2,521	$m^2$	
1,1001	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	1,696		
	Limestone	E06	2,925	$m^2$	
	Wall paint	E12	14,803	$m^2$	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02	1,450	$m^2$	
Walls	Wall ceramic tiles	E06	1,582	$m^2$	
vv alls	Polyurethane varnish to wood	E12	685	m <sup>2</sup>	
	Glass blocs walls	E01			
	Stone Cladding	E06			

## **Work parcel:** External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding Insulated aluminum panels "Alucomat"	B04 B04	1,996	m <sup>2</sup>	
waiis	Thick coating "Stucco"	B04	168	m <sup>2</sup>	

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	807	$m^2$	
	Curtain walls	B06	236	$m^2$	
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	216	nb	
Partitions	Steel doors	E05	48	nb	
	Sun screen louvers	E05	866	$m^2$	
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05			
Guard rails	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05	6	$m^2$	
Skydomes					

# List of Finishing

## 4.4.3.6 Faculty of Medicine (Bldg. M11-M12)

 $\underline{\textbf{Work parcel:}} \text{ Internal finishing }$ 

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	376	m <sup>2</sup>	
	Mineral fiber tiles 60x60 & 120x60	E10	4,601	$m^2$	
	Aluminum strips	E10	311	$m^2$	
Ceiling	Perforated acoustical panels in amphitheatres	E10	304	$m^2$	
	Plaster on metal lath	E10			
	Ceiling paint	E12	2,232	$m^2$	
	Floor ceramic tiles	E06	2,238	$m^2$	
	Agglomerated tiles, treads and risers	E06	3,344	$m^2$	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06	40	$m^2$	
Floor	Vinyl and rubber	E07	702	$m^2$	
F100I	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	1,348	$m^2$	
	Limestone	E06	704	m <sup>2</sup>	
	Wall paint	E12	12,262	$m^2$	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02	224		
Walls	Wall ceramic tiles	E06	1,868		
vv ans	Polyurethane varnish to wood	E12	183	***	
	Glass blocs walls	E01	6	***	
	Stone Cladding	E06	51	$m^2$	

## **Work parcel:** External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
X 11	Stone cladding Insulated aluminum panels "Alucomat"	B04 B04	817	m <sup>2</sup>	
Walls	Thick coating "Stucco"	B04	2,082	m <sup>2</sup>	

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	7,600		
	Curtain walls	B06	142	$m^2$	
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	212	nb	
Partitions	Steel doors	E05	11	nb	
Partitions	Sun screen louvers	E05			
	Rolling Shutter	E05	2	nb	
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05			
Guaru rans	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing

## 4.4.3.7 Faculty of Dentistry (Bldg. M13-M14)

 $\underline{\textbf{Work parcel:}} \text{ Internal finishing }$ 

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	564		
	Mineral fiber tiles 60x60 & 120x60	E10	6,902		
	Aluminum strips	E10	466		
Ceiling	Perforated acoustical panels in amphitheatres	E10	457	$m^2$	
	Plaster on metal lath	E10			
	Ceiling paint	E12	3,348	m <sup>2</sup>	
	Floor ceramic tiles	E06	3,358	m <sup>2</sup>	
	Agglomerated tiles, treads and risers	E06	5,016	•	
	Marble tiles, treads and risers	E06	3,010	111	
	Laminated wood parquet and professor stage	E06	60	$m^2$	
Floor	Vinyl and rubber	E07	1,053	$m^2$	
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	2,023	$m^2$	
	Wall paint	E12	18,393	$m^2$	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02	336		
Walls	Wall ceramic tiles	E06	2,801		
	Polyurethane varnish to wood	E12	274		
	Glass blocs walls	E01	10	m <sup>2</sup>	
	Stone Cladding	E06	77	m <sup>2</sup>	

## $\underline{\textbf{Work parcel:}} \ External \ finishing$

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
W. 11	Stone cladding Insulated aluminum panels "Alucomat"	B04 B04	1,226	m <sup>2</sup>	
Walls	Thick coating "Stucco"	B04	3,123	m <sup>2</sup>	

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	11,400	$m^2$	
	Curtain walls	B06	213		
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	318	nb	
Partitions	Steel doors	E05	17	nb	
Partitions	Sun screen louvers	E05			
	Rolling Shutter	E05			
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05			
Guaru fails	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing

## 4.4.3.8 Faculty of Public Health (Bldg. Q)

 $\underline{\textbf{Work parcel:}} \text{ Internal finishing }$ 

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	546	$m^2$	
	Mineral fiber tiles 60x60 & 120x60	E10	8,801	$m^2$	
	Aluminum strips	E10	336	$m^2$	
Ceiling	Perforated acoustical panels in amphitheatres	E10	644	$m^2$	
	Plaster on metal lath	E10			
	Ceiling paint	E12	5,130	$m^2$	
	Floor ceramic tiles	E06	2,956	$m^2$	
	Agglomerated tiles, treads and risers	E06	10,147	$m^2$	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06	244	$m^2$	
Floor	Vinyl and rubber	E07	2,177	$m^2$	
11001	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	3,046	$m^2$	
	Limestone	E06	496	$m^2$	
	Wall paint	E12	25,994	$m^2$	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02	2,650		
Walls	Wall ceramic tiles	E06	3,780	$m^2$	
vv ans	Polyurethane varnish to wood	E12			
	Glass blocs walls	E01	20	$m^2$	
	Stone Cladding	E06			

## **Work parcel:** External finishing

Stone cladding B04 3,465 m <sup>2</sup>		y Item Description	Trade	Qty	Unit	Maintenance Procedure
Insulated aluminum panels "Alucomat" B04 780 m <sup>2</sup>		Insulated aluminum panels "Alucomat"				
Walls Thick coating "Stucco"  B04 2,652 m <sup>2</sup>	Walls	S - 1	B04		2	

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	1,512	$m^2$	
	Curtain walls	B06			
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	554	nb	
Partitions	Steel doors	E05	27	nb	
	Sun screen louvers	E05	331	$m^2$	
	Gate	E05	1	nb	
	Stainless steel Guard rails and handrails	E05	450	lm	
Guard rails	Painted black steel guard rails and handrails	E05	126	lm	
Guaru rans	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing

## 4.4.3.9 Faculty of Sciences (FOS)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	0	m2	
	Mineral fiber tiles 60x60 & 120x60	E10	289	m2	
Ceiling	Aluminum strips	E10	4,438	m2	
	Ceiling paint	E12	18,641	m2	
	Floor ceramic tiles	E06	3,589	m2	
	Agglomerated tiles, treads and risers	E06	53	m2	
	Marble tiles, treads and risers	E06	3,122	m2	
Floor	Laminated wood parquet and professor stage	E06	0	m2	
	Vinyl and rubber	E07	13,495	m2	
	Raised floor	E08	0	m2	
	Floor paint	E12	0	m2	
	Wall paint	E12	20,228	m2	
	Fabric acoustical covering in amphitheaters	E04	1,151	m2	
	Concrete Brut Paint	E02	703	m2	
Walls	Wall ceramic tiles	E06	3,846	m2	
vv ans	Polyurethane varnish to wood	E12	0	m2	
	Glass blocs walls	E01	0	m2	
	Marble Cladding	E06	248	m2	
	Glass Panel		1,210	m2	

## **Work parcel:** External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Marble cladding	B04	3,930	m2	
Walls	Concrete Brut Paint	B04	4,010	m2	
	Ceramic Tiles	B04	2,257	m2	

## $\underline{\textbf{Work parcel:}}$ Joinery and fenestration

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	4,152	m2	
Doors,	Curtain walls	B06	0	m2	
Windows &	Wooden doors	E04	342	nb	
Partitions	Steel doors	E05	73	nb	
Partitions	Gate	E05	6	nb	
	Wooden panels		3,160	m2	
Guard rails	Aluminum Guard rails and handrails	E05	0	m2	
	Painted black steel guard rails and handrails	E05	585	m2	
	·				·

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
Ceiling	Ribbed slabs & solid Slabs	B01	42,356	m2	
Walls	Concrete walls & hollow block walls	B01	32,523	m2	
Roofing	Waterproofing type 2 "Accessible terraces"	B03	9,692	m2	

# List of Finishing

## 4.4.4.1 Conference Center (Bldg. F)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	200	m <sup>2</sup>	
	Mineral fiber tiles 60x60 & 120x60	E10	1,230		
	Aluminum strips	E10	180	m <sup>2</sup>	
Ceiling	Perforated acoustical panels in amphitheatres	E10	2,980	m <sup>2</sup>	
	Plaster on metal lath	E10			
	Ceiling paint	E12	3,835	m <sup>2</sup>	
	Floor ceramic tiles	E06	235	m <sup>2</sup>	
	Agglomerated tiles, treads and risers	E06	4,348	***	
	Marble tiles, treads and risers	E06	112	m <sup>2</sup>	
	Laminated wood parquet and professor stage	E06	800	m <sup>2</sup>	
Floor	Vinyl and rubber	E07	116	m <sup>2</sup>	
	Carpet	E07	1,079	m <sup>2</sup>	
	Raised floor	E08			
	Floor paint	E12	4,240	m <sup>2</sup>	
	Concrete tiles	E06	9,663		
	Wall paint	E12	10,195	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04	10,173	111	
	Thick coating "Stucco"	E02	1,400		
	Wall ceramic tiles	E02	850	m <sup>2</sup>	
Walls	Polyurethane varnish to wood	E12	650	111	
	Glass blocs walls	E01	60	m <sup>2</sup>	
	Stone Cladding	E06	2,030	m <sup>2</sup>	
		1			

#### Work parcel: External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04	3,570	m <sup>2</sup>	
Walls	Insulated aluminum panels "Alucomat"	B04	290	$m^2$	
wans	Thick coating "Stucco"	B04			

## $\underline{\textbf{Work parcel:}}$ Joinery and fenestration

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	135	m <sup>2</sup>	
	Curtain walls	B06	454	m <sup>2</sup>	
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	169	nb	
Partitions	Steel doors	E05	42	nb	
	Sun screen louvers	E05			
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	120	lm	
Guara rans	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing

## 4.4.4.1 Conference Center (Bldg. F)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02			
	Steel canopies	E05			
	Concrete walls	B01			
Walls	Hollow block walls	E01	3,085	m <sup>2</sup>	
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.2-1 Stadium (K1)

## Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10	9	m <sup>2</sup>	
	Aluminum strips	E10			
Ceiling	Perforated acoustical panels in amphitheatres	E10			
	Plaster on metal lath	E10			
	Ceiling paint	E12	700	m <sup>2</sup>	
	Floor ceramic tiles	E06	242	111	
	Agglomerated tiles, treads and risers	E06	286	111	
	Marble tiles, treads and risers	E06	113	m <sup>2</sup>	
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07	4	m <sup>2</sup>	
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	815	m <sup>2</sup>	
	Wall paint	E12	1,997	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02			
Walls	Wall ceramic tiles	E06	529	m <sup>2</sup>	
** alis	Polyurethane varnish to wood	E12			
	Glass blocs walls	E01	***************************************		
	Stone Cladding	E06			

## Work parcel: External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04			
Walls	Insulated aluminum panels "Alucomat"	B04			
wans	Thick coating "Stucco"	B04			

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	72	$m^2$	
	Curtain walls	B06			
Doors.	Structural glass	B06			
Windows &	Wooden doors	E04	40	nb	
Partitions	Steel doors	E05			
Turnions	Sun screen louvers	E05	32	m <sup>2</sup>	
	Rolling Shutter	E05			
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	517	lm	
	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing

## 4.4.4.2-1 Stadium (K1)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02	***************************************		
	Steel canopies	E05			
	Concrete walls	B01			
Walls	Hollow block walls	E01	941	m <sup>2</sup>	
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.2-2 Open Air Multipurpose Stadium (K2)

## Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10			
	Aluminum strips	E10			
Ceiling	Perforated acoustical panels in amphitheatres	E10			
	Plaster on metal lath	E10			
	Ceiling paint	E12	8	m <sup>2</sup>	
	Floor ceramic tiles	E06	239	m <sup>2</sup>	
	Agglomerated tiles, treads and risers	E06	267	m <sup>2</sup>	
	Marble tiles, treads and risers	E06	66	m <sup>2</sup>	
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07			
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	885	m <sup>2</sup>	
	Wall paint	E12	1,740	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02			
Walls	Wall ceramic tiles	E06	481	m <sup>2</sup>	
vv ans	Polyurethane varnish to wood	E12			
	Glass blocs walls	E01			
	Stone Cladding	E06			

## $\underline{\textbf{Work parcel:}} \ \textbf{External finishing}$

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding Insulated aluminum panels "Alucomat"	B04 B04			
Walls	Thick coating "Stucco"	B04			

## $\underline{\textbf{Work parcel:}}$ Joinery and fenestration

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	62	m <sup>2</sup>	
	Curtain walls	B06			
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	40	nb	
Partitions	Steel doors	E05			
	Sun screen louvers	E05			
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	552	lm	
Guard rails	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05		_	
Skydomes					

# List of Finishing

## 4.4.4.2-2 Open Air Multipurpose Stadium (K2)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02			
	Steel canopies	E05			
	Concrete walls	B01			
Walls	Hollow block walls	E01	684	m <sup>2</sup>	
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.2-3 Olympic Swimming Pool (K3)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	35	m <sup>2</sup>	
	Mineral fiber tiles 60x60 & 120x60	E10			
	Aluminum strips	E10			
Ceiling	Perforated acoustical panels in amphitheatres	E10			
	Plaster on metal lath	E10			
	Ceiling paint	E12	515	m <sup>2</sup>	
	Floor ceramic tiles	E06	2,631	m <sup>2</sup>	
	Agglomerated tiles, treads and risers	E06	11	m <sup>2</sup>	
	Marble tiles, treads and risers	E06	***************************************		
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07			
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	85	m <sup>2</sup>	
	Limestone	E06	64	m <sup>2</sup>	
	Wall paint	E12	4,050	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco'	E02			
Walls	Wall ceramic tiles	E06	2,823	m <sup>2</sup>	
vv alls	Polyurethane varnish to wood	E12			
	Glass blocs walls	E01	32	m <sup>2</sup>	
	Stone Cladding	E06	91	m <sup>2</sup>	

## Work parcel: External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04	348	m <sup>2</sup>	
Walls	Insulated aluminum panels "Alucomat"	B04			
wans	Thick coating "Stucco"	B04			

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	87	$m^2$	
	Curtain walls	B06			
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04			
Partitions	Steel doors	E05	22	nb	
	Sun screen louvers	E05	7	m <sup>2</sup>	
	Gates	E05	2	nb	
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	10	lm	
Guara rans	Painted black steel handrail with glazing	E05			
Skylights & Skydomes	Skylights and Skydomes	B05			

# List of Finishing

## 4.4.4.2-3 Olympic Swimming Pool (K3)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02			
	Steel canopies	E05			
	Concrete walls	B01			
Walls	Hollow block walls	E01	893	m <sup>2</sup>	
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.3 Library of Medical Sciences (Bldg. M2)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10	384		
	Aluminum strips	E10	41	m <sup>2</sup>	
Ceiling	Perforated acoustical panels in amphitheatres	E10	1,028	m <sup>2</sup>	
	Plaster on metal lath	E10			
	Ceiling paint	E12	1,474	m <sup>2</sup>	
	Floor ceramic tiles	E06	41	m <sup>2</sup>	
	Agglomerated tiles, treads and risers	E06	856	m <sup>2</sup>	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07	1,094		
	Carpet	E07	1,139	m <sup>2</sup>	
	Raised floor	E08			
	Floor paint	E12	521	m <sup>2</sup>	
	Wall paint	E12	5,084	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02			
Walls	Wall ceramic tiles	E06	203	m <sup>2</sup>	
** alls	Polyurethane varnish to wood	E12	384	m <sup>2</sup>	
	Glass blocs walls	E01			
	Stone Cladding	E06			

## $\underline{\textbf{Work parcel:}} \ \textbf{External finishing}$

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04			
Walls	Insulated aluminum panels "Alucomat"	B04			
wans	Thick coating "Stucco"	B04			

## $\underline{\textbf{Work parcel:}}$ Joinery and fenestration

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	216	m <sup>2</sup>	
	Curtain walls	B06	135	m <sup>2</sup>	
Doors.	Structural glass	B06			
Windows &	Wooden doors	E04	34	nb	
Partitions	Steel doors	E05	12	nb	
	Sun screen louvers	E05			
	Rolling Shutter	E05			
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05			
Guara rans	Painted black steel handrail with glazing	E05			
Skylights & Skydomes	Skylights and Skydomes	B05			

# List of Finishing

## 4.4.4.3 Library of Medical Sciences (Bldg. M2)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02	***************************************		
	Steel canopies	E05	***************************************		
	Concrete walls	B01		2	
Walls	Hollow block walls	E01	582	m <sup>2</sup>	
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.4 Male Dormitories (Bldg. R1)

## Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10	8,469	m <sup>2</sup>	
	Aluminum strips	E10	2,699	m <sup>2</sup>	
Ceiling	Perforated acoustical panels in amphitheatres	E10			
	Plaster on metal lath	E10	1,276		
	Ceiling paint	E12	12,911	m <sup>2</sup>	
		E0.	2.044	2	
	Floor ceramic tiles	E06	3,844		
	Agglomerated tiles, treads and risers	E06	18,479	m <sup>2</sup>	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07			
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	10,930	m <sup>2</sup>	
	Concrete tiles	E06	1,428	m <sup>2</sup>	
	Wall paint	E12	68,400	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02			
Walls	Wall ceramic tiles	E06	17,626		
wans	Polyurethane varnish to wood	E12	3,412	m <sup>2</sup>	
	Glass blocs walls	E01			
	Stone Cladding	E06			

#### Work parcel: External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04	4,720	$m^2$	
Walls	Insulated aluminum panels "Alucomat"	B04			
wans	Thick coating "Stucco"	B04			

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	2,950	m <sup>2</sup>	
	Curtain walls	B06			
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	1,973	nb	
Partitions	Steel doors	E05	676	nb	
	Sun screen louvers	E05			
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	1,141	lm	
	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing

## 4.4.4.4 Male Dormitories (Bldg. R1)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02			
	Steel canopies	E05			
W. II	Concrete walls	B01		3	
Walls	Hollow block walls	E01	26,623	m <sup>2</sup>	
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.5 Female Dormitories (Bldg. R2)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10	3,829	m <sup>2</sup>	
	Aluminum strips	E10	1,376	m <sup>2</sup>	
Ceiling	Perforated acoustical panels in amphitheatres	E10	6,503	m <sup>2</sup>	
	Plaster on metal lath	E10	567	m <sup>2</sup>	
	Ceiling paint	E12			
	Floor ceramic tiles	E06	1,659	m <sup>2</sup>	
		E06	7,835		
	Agglomerated tiles, treads and risers  Marble tiles, treads and risers	E06	1,833	m <sup>2</sup>	
		E06			
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber				
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12			
	Concrete tiles	E06			
	Wall paint	E12	27,160	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco'	E02			
*** 11	Wall ceramic tiles	E06	10,599	m <sup>2</sup>	
Walls	Polyurethane varnish to wood	E12	1,943	m <sup>2</sup>	
	Glass blocs walls	E01			
	Stone Cladding	E06			

#### **Work parcel:** External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04	1,968	$m^2$	
Walls	Insulated aluminum panels "Alucomat"	B04			
wans	Thick coating "Stucco"	B04			

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	1,253	m <sup>2</sup>	
	Curtain walls	B06			
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	978	nb	
Partitions	Steel doors	E05	10	nb	
	Sun screen louvers	E05			
	Gate	E05	1	nb	
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	254	lm	
2 4 14115	Painted black steel handrail with glazing	E05			
Skylights & Skydomes	Skylights and Skydomes	B05			

# List of Finishing

## 4.4.4.5 Female Dormitories (Bldg. R2)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
a	PRS slabs	B10			
Ceiling	Steel slab	B02			
	Steel canopies	E05			
	Concrete walls	B01			
Walls	Hollow block walls	E01	14,753	m <sup>2</sup>	
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.6 Technical Building (T)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10	1,244		
	Aluminum strips	E10	125	m <sup>2</sup>	
Ceiling	Perforated acoustical panels in amphitheatres	E10	79	m <sup>2</sup>	
	Plaster on metal lath	E10	9	m <sup>2</sup>	
	Ceiling paint	E12	5,150	m <sup>2</sup>	
	Floor ceramic tiles	E06	430	m <sup>2</sup>	
	Agglomerated tiles, treads and risers	E06	5,199	m <sup>2</sup>	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07			
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	114	m <sup>2</sup>	
	Wall paint	E12	11,090	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco'	E02			
Walls	Wall ceramic tiles	E06	402	m <sup>2</sup>	
vv ans	Polyurethane varnish to wood	E12	390	m <sup>2</sup>	
	Glass blocs walls	E01			
	Stone Cladding	E06			

## Work parcel: External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04			
Walls	Insulated aluminum panels "Alucomat"	B04			
vv ans	Thick coating "Stucco"	B04	3,663	$m^2$	

## $\underline{\textbf{Work parcel:}}$ Joinery and fenestration

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	443	m <sup>2</sup>	
	Curtain walls	B06			
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	90	nb	
Partitions	Steel doors	E05	36	nb	
	Sun screen louvers	E05	***************************************		
	Steel Acoustical Door	E05	1	nb	
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	99	lm	
Guara rans	Painted black steel handrail with glazing	E05			
Skylights & Skydomes	Skylights and Skydomes	B05			

# List of Finishing

## 4.4.4.6 Technical Building (T)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02	***************************************		
	Steel canopies	E05			
	Concrete walls	B01			
Walls	Hollow block walls	E01	1,142	m <sup>2</sup>	
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.7 Restaurant & Functional Housing (Bldg.U2)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	120	m <sup>2</sup>	
	Mineral fiber tiles 60x60 & 120x60	E10	2,115	m <sup>2</sup>	
	Aluminum strips	E10	600	m <sup>2</sup>	
Ceiling	Perforated acoustical panels in amphitheatres	E10			
	Plaster on metal lath	E10	540	m <sup>2</sup>	
	Ceiling paint	E12	2,590	m <sup>2</sup>	
	Floor ceramic tiles	E06	790	m <sup>2</sup>	
	Agglomerated tiles, treads and risers	E06	3,795	m <sup>2</sup>	
	Marble tiles, treads and risers	E06	415	m <sup>2</sup>	
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07			
	Carpet	E07	105	m <sup>2</sup>	
	Raised floor	E08			
	Floor paint	E12	1,110	m <sup>2</sup>	
	Wall paint	E12	8,382	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02	749	m <sup>2</sup>	
Walls	Wall ceramic tiles	E06	29,175	m <sup>2</sup>	
vv ans	Polyurethane varnish to wood	E12			
	Glass blocs walls	E01	10	m <sup>2</sup>	
	Stone Cladding	E06	105	m <sup>2</sup>	

## Work parcel: External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04	3,315	m <sup>2</sup>	
Walls	Insulated aluminum panels "Alucomat"	B04			
vv ans	Thick coating "Stucco"	B04	210	$m^2$	

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	341	m <sup>2</sup>	
	Curtain walls	B06	271	m <sup>2</sup>	
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	185	nb	
Partitions	Steel doors	E05	46	nb	
	Sun screen louvers	E05	55	m <sup>2</sup>	
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	350	lm	
	Painted black steel handrail with glazing	E05			
Skylights & Skydomes	Skylights and Skydomes	B05			

# List of Finishing

## 4.4.4.7 Restaurant & Functional Housing (Bldg.U2)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02			
	Steel canopies	E05			
	Concrete walls	B01			
Walls	Hollow block walls	E01	3,545	m <sup>2</sup>	
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.8 Parking (U3)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10			
	Aluminum strips	E10			
Ceiling	Perforated acoustical panels in amphitheatres	E10			
	Plaster on metal lath	E10			
	Ceiling paint	E12	213	m <sup>2</sup>	
	Floor ceramic tiles	E06			
	Agglomerated tiles, treads and risers	E06	57	m <sup>2</sup>	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07			
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	8,552	m <sup>2</sup>	
	Wall paint	E12	13,987	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02			
Walls	Wall ceramic tiles	E06			
vv ans	Polyurethane varnish to wood	E12			
	Glass blocs walls	E01			
	Stone Cladding	E06			

#### **Work parcel:** External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04	1,970	$m^2$	
Walls	Insulated aluminum panels "Alucomat"	B04			
wans	Thick coating "Stucco"	B04	150	m <sup>2</sup>	

## $\underline{\textbf{Work parcel:}}$ Joinery and fenestration

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	8	m <sup>2</sup>	
	Curtain walls	B06			
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	3	nb	
Partitions	Steel doors	E05	30	nb	
	Sun screen louvers	E05			
	Gates	E05	2	nb	
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	208	lm	
Guard rans	Painted black steel handrail with glazing	E05			
Claylighta &	Skylights and Skydomes	B05			
, ,	Skyrights and Skydomes	<b>D</b> 03			
Skydomes					

# List of Finishing

# 4.4.4.8 Parking (U3)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02	***************************************		
	Steel canopies	E05			
	Concrete walls	B01			
Walls	Hollow block walls	E01	1,222	m <sup>2</sup>	
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.9 Eastern Parking (V1)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10			
	Aluminum strips	E10			
Ceiling	Perforated acoustical panels in amphitheatres	E10			
	Plaster on metal lath	E10			
	Ceiling paint	E12	3,255	m <sup>2</sup>	
	Floor ceramic tiles	E06			
	Agglomerated tiles, treads and risers	E06	112	m <sup>2</sup>	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07			
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	11,850	$m^2$	
	Concrete tiles	E06			
	Wall paint	E12	29,770	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02			
Walls	Wall ceramic tiles	E06			
w ans	Polyurethane varnish to wood	E12			
	Glass blocs walls	E01			
	Stone Cladding	E06			

## Work parcel: External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
*** 11	Stone cladding Insulated aluminum panels "Alucomat"	B04 B04	60	m <sup>2</sup>	
Walls	Thick coating "Stucco"	B04			

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05			
	Curtain walls	B06			
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04	1	nb	
Partitions	Steel doors	E05	17	nb	
	Sun screen louvers	E05			
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05			
Guard rails	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing

## 4.4.4.9 Eastern Parking (V1)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02			
	Steel canopies	E05			
	Concrete walls	B01			
Walls	Hollow block walls	E01	1,483	m <sup>2</sup>	
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.10 Water Tower (V2)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10			
	Aluminum strips	E10			
Ceiling	Perforated acoustical panels in amphitheatres	E10			
	Plaster on metal lath	E10			
	Ceiling paint	E12	48	m <sup>2</sup>	
	Floor ceramic tiles	E06	53	m <sup>2</sup>	
	Agglomerated tiles, treads and risers	E06			
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07			
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12			
	Limestone	E06			
	Wall paint	E12	174	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02			
Walls	Wall ceramic tiles	E06			
vv ans	Polyurethane varnish to wood	E12			
	Glass blocs walls	E01			
	Stone Cladding	E06			

#### Work parcel: External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04			
Walls	Insulated aluminum panels "Alucomat"	B04			
walls	Thick coating "Stucco"	B04			

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05			
	Curtain walls	B06			
Doors,	Structural glass	B06			
Windows &	Wooden doors	E04			
Partitions	Steel doors	E05			
	Sun screen louvers	E05			
	Gate	E05	-		
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	126	lm	
Guard rans	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing

## 4.4.4.10 Water Tower (V2)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02			
	Steel canopies	E05	***************************************		
44	Concrete walls	B01			
Walls	Hollow block walls	E01			
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.11 Pumping Station (V3)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10			
a	Aluminum strips	E10			
Ceiling	Perforated acoustical panels in amphitheatres	E10			
	Plaster on metal lath	E10			
	Ceiling paint	E12			
	Floor ceramic tiles	E06			
	Agglomerated tiles, treads and risers	E06			
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07			
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12			
	Limestone	E06			
	Wall paint	E12			
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02			
Walls	Wall ceramic tiles	E06			
vv ans	Polyurethane varnish to wood	E12			
	Glass blocs walls	E01			
	Stone Cladding	E06			

## $\underline{\textbf{Work parcel:}} \ \textbf{External finishing}$

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04			
Walls	Insulated aluminum panels "Alucomat"	B04			
Walls	Thick coating "Stucco"	B04			

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05			
	Curtain walls	B06			
Doors.	Structural glass	B06			
Windows &	Wooden doors	E04			
Partitions	Steel doors	E05			
	Sun screen louvers	E05			
	Gate	E05			
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05			
	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing

## 4.4.4.11 Pumping Station (V3)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02			
	Steel canopies	E05			
	Concrete walls	B01			
Walls	Hollow block walls	E01			
	Waterproofing type 1 "Red tiles"	B03			
Roofing	Waterproofing type 2 "Accessible terraces"	B03			
	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.12 Utility Tunnel (V4)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10			
	Aluminum strips	E10			
Ceiling	Perforated acoustical panels in amphitheatres	E10			
	Plaster on metal lath	E10			
	Ceiling paint	E12			
	Floor ceramic tiles	E06			
	Agglomerated tiles, treads and risers	E06		***************************************	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07			
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	10,000	m <sup>2</sup>	
	Limestone	E06			
	Wall paint	E12	20,980	m <sup>2</sup>	
	Wooden acoustical covering in amphitheaters	E04		111	
	Thick coating "Stucco"	E02			
337 11	Wall ceramic tiles	E06			
Walls	Polyurethane varnish to wood	E12			
	Glass blocs walls	E01			
	Stone Cladding	E06			

## Work parcel: External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04			
Walls	Insulated aluminum panels "Alucomat"	B04			
walls	Thick coating "Stucco"	B04			

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05			
	Curtain walls	B06	***************************************		
Doors,	Structural glass	B06	***************************************		
Windows &	Wooden doors	E04			
Partitions	Steel doors	E05	***************************************		
	Sun screen louvers	E05	***************************************		
	Gate	E05			
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05	126	lm	
	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing 4.4.4.12 Utility Tunnel (V4)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02			
	Steel canopies	E05			
44	Concrete walls	B01			
Walls	Hollow block walls	E01			
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.13 Underground storm water Reservoir (V6)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10			
	Aluminum strips	E10			
Ceiling	Perforated acoustical panels in amphitheatres	E10			
	Plaster on metal lath	E10			
	Ceiling paint	E12			
	Floor ceramic tiles	E06			
	Agglomerated tiles, treads and risers	E06			
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07			
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12			
	Limestone	E06			
	Wall paint	E12			
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02			
Walls	Wall ceramic tiles	E06			
vv ans	Polyurethane varnish to wood	E12			
	Glass blocs walls	E01			
	Stone Cladding	E06			

#### $\underline{\textbf{Work parcel:}} \ \textbf{External finishing}$

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04			
Walls	Insulated aluminum panels "Alucomat"	B04			
Walls	Thick coating "Stucco"	B04			
					**************************************

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05			
	Curtain walls	B06			
Doors.	Structural glass	B06			
Windows &	Wooden doors	E04			
Partitions	Steel doors	E05			
	Sun screen louvers	E05			
	Gate	E05			
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05			
Cuald fulls	Painted black steel handrail with glazing	E05			
Skylights & Skydomes	Skylights and Skydomes	В05			

# List of Finishing

## 4.4.4.13 Underground storm water Reservoir (V6)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
	PRS slabs	B10			
Ceiling	Steel slab	B02			
	Steel canopies	E05			
	Concrete walls	B01			
Walls	Hollow block walls	E01			
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03			

# List of Finishing

## 4.4.4.14 Central Catering and Underground Western Parking (X)

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10			
	Mineral fiber tiles 60x60 & 120x60	E10	590	m <sup>2</sup>	
	Aluminum strips	E10	1,542	m <sup>2</sup>	
Ceiling	Perforated acoustical panels in amphitheatres	E10			
	Plaster on metal lath	E10			
	Ceiling paint	E12	1,065	m <sup>2</sup>	
	Floor ceramic tiles	E06	1,799	m <sup>2</sup>	
	Agglomerated tiles, treads and risers	E06	1,002	m <sup>2</sup>	
	Marble tiles, treads and risers	E06			
	Laminated wood parquet and professor stage	E06			
Floor	Vinyl and rubber	E07		***************************************	
	Carpet	E07			
	Raised floor	E08			
	Floor paint	E12	23,196	m <sup>2</sup>	
	Wall paint	E12			
	Wooden acoustical covering in amphitheaters	E04			
	Thick coating "Stucco"	E02	200	m <sup>2</sup>	
Walls	Wall ceramic tiles	E06	1,979	m <sup>2</sup>	
w ans	Polyurethane varnish to wood	E12	499	m <sup>2</sup>	
	Glass blocs walls	E01			
	Stone Cladding	E06			

## $\underline{\textbf{Work parcel:}} \ \textbf{External finishing}$

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Stone cladding	B04	870	m <sup>2</sup>	
Walls	Insulated aluminum panels "Alucomat"	B04			
vv ans	Thick coating "Stucco"	B04	2,100	m <sup>2</sup>	

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	47	m <sup>2</sup>	
	Curtain walls	B06			
Doors.	Structural glass	B06			
Windows &	Wooden doors	E04	43	nb	
Partitions	Steel doors	E05	56	nb	
	Sun screen louvers	E05			
	Gate	E05	1	nb	
	Stainless steel Guard rails and handrails	E05			
Guard rails	Painted black steel guard rails and handrails	E05			
Guard Tails	Painted black steel handrail with glazing	E05			
Skylights &	Skylights and Skydomes	B05			
Skydomes					

# List of Finishing

## 4.4.4.14 Central Catering and Underground Western Parking (X)

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Solid slabs	B01			
a	PRS slabs	B10			
Ceiling	Steel slab	B02			
	Steel canopies	E05			
	Concrete walls	B01			
Walls	Hollow block walls	E01	3,792	m <sup>2</sup>	
	Waterproofing type 1 "Red tiles"	B03			
	Waterproofing type 2 "Accessible terraces"	B03			
Roofing	Waterproofing type 3 "Non accessible terraces"	B03			
	Waterproofing type 8 & 9 "TPO membrane"	B03	,		

# List of Finishing

## 4.4.4.15 Faculty's of Sciences Library

#### Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	100	m2	
a	Mineral fiber tiles 60x60 & 120x60	E10	1,100	m2	
Ceiling	Aluminum strips	E10	2,170	m2	
	Ceiling paint	E12	11,000	m2	
	Floor ceramic tiles	E06	13,000	m2	
	Agglomerated tiles, treads and risers	E06	0	m2	
	Marble tiles, treads and risers	E06	470	m2	
Floor	Laminated wood parquet and professor stage	E06	0	m2	
	Vinyl and rubber	E07	180	m2	
	Raised floor	E08	0	m2	
	Floor paint	E12	970	m2	
	Wall paint	E12	15,500	m2	
	Fabric acoustical covering in amphitheaters	E04	70	m2	
	Concrete Brut Paint	E02	700	m2	
Walls	Wall ceramic tiles	E06	1,100	m2	
vv ans	Polyurethane varnish to wood	E12	0	m2	
	Glass blocs walls	E01	0	m2	
	Marble Cladding	E06	300	m2	

#### Work parcel: External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Marble cladding	B04	1,560	m2	
Walls	Concrete Brut Paint	B04	0	m2	
	Ceramic Tiles	B04	1,500	m2	

#### Work parcel: Joinery and fenestration

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	1,550	m2	
Doors,	Curtain walls	B06	1,000	m2	
Doors, Windows &	Wooden doors	E04	117	nb	
Partitions	Steel doors	E05	12	nb	
	Gate	E05	12	nb	
	Aluminum Guard rails and handrails	E05	150	m2	
Guard rails	Painted black steel guard rails and handrails	E05	0	m2	

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
Ceiling	Ribbed slabs & solid Slabs	B01	14,500	m2	
Walls	Concrete walls & hollow block walls	B01	10,300	m2	
Roofing	Waterproofing type 2 "Accessible terraces"	B03	1,700	m2	

# List of Finishing

## 4.4.4.16 Faculty's of Sciences Cafeteria

Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Gypsum board	E10	0	m2	
a	Mineral fiber tiles 60x60 & 120x60	E10	0	m2	
Ceiling	Aluminum strips	E10	1,320	m2	
	Ceiling paint	E12	900	m2	
	Floor ceramic tiles	E06	1,500	m2	
	Agglomerated tiles, treads and risers	E06	0	m2	
	Marble tiles, treads and risers	E06	0	m2	
Floor	Laminated wood parquet and professor stage	E06	0	m2	
	Vinyl and rubber	E07	150	m2	
	Raised floor	E08	0	m2	
	Floor paint	E12	560	m2	
	Wall paint	E12	2,200	m2	
	Fabric acoustical covering in amphitheaters	E04	0	m2	
	Concrete Brut Paint	E02	620	m2	
Walls	Wall ceramic tiles	E06	500	m2	
wans	Polyurethane varnish to wood	E12	0	m2	
	Glass blocs walls	E01	0	m2	
	Marble Cladding	E06	0	m2	

#### Work parcel: External finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Marble cladding	B04	0	m2	
Walls	Concrete Brut Paint	B04	730	m2	
	Ceramic Tiles	B04	190	m2	

#### Work parcel: Joinery and fenestration

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows, doors and partitions	B05	260	m2	
Doors,	Curtain walls	B06	0	m2	
Windows &	Wooden doors	E04	45	m2	
Partitions	Steel doors	E05	3	nb	
	Gate	E05	0	nb	
Guard rails	Aluminum Guard rails and handrails	E05	0		
	Painted black steel guard rails and handrails	E05	0		

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
Ceiling	Ribbed slabs & solid Slabs	B01	2,300	m2	
Walls	Concrete walls & hollow block walls	B01	1,860	m2	
Roofing	Waterproofing type 2 "Accessible terraces"	В03	1,700	m2	

# List of Finishing

## 4.4.4.17 Steel Hangar

## Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
Ceiling	Corrugated Sheet		370	m2	
	Sandwish Panel	E12	340	m2	
Walls	Gypsum board partition	E06	35	m2	

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows	B05	6	Nr	
Windows & Partitions	Steel doors	E05	3	Nr	



# List of Finishing

## 4.4.4.18 Steel Portable Cabinets including Lebanese Army and Interior Security Forces Cabinet Units

#### Work parcel: Internal finishing

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
Ceiling	Corrugated Sheet		1,000	m2	
	Sandwish Panel	E12	200	m2	
Walls	Gypsum board partition	E06	200	m2	

Family	Item Description	Trade	Qty	Unit	Maintenance Procedure
	Aluminum windows	B05	50	Nr	
Doors &	Steel doors	E05	10	Nr	
Windows	Folding Doors		15	Nr	
	Wooden Doors		20	Nr	